

IN THE DRAWINGS

The Examiner requested new drawings because of unclear labels. Applicants submit a set of new drawings accordingly.

REMARKS

Reconsideration of the present application is respectfully requested.

Summary of Office Action

Claims 1-7, 9 and 22 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-4, 7-11, 14, 19-21, 23 and 25 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application No. 7,042,877 of Foster et al. ("Foster").

Claims 5, 6, 12, 13, 15-18 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Foster in view of U.S. Patent No. 7,127,633 of Olson et al. ("Olson").

Claims 24 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Foster in view of U.S. Patent Publication No. 2002/0191602 of Woodring et al. ("Woodring").

Summary of Amendments

Claims 1-26 have been canceled. In particular, these cancellations are believed to render the rejections under 35 U.S.C. §112 against claims 1-7, 9 and 22 moot.

Claims 27-47 have been newly added. For example, paragraphs [0041]-[0047] of Applicants' Specification support the newly added claims. No new matter has been added.

Discussion of Rejections under 35 U.S.C. §§ 102 & 103

As discussed below, newly added claims 27-47 are patentable over the cited references: Foster, Olson and Woodring.

Independent claim 27 recites:

27. A machine-implemented method for a storage system to transmit an IP packet over a Fibre Channel (FC) network, the method comprising:

accessing an FC name server database in response to a request for a connection over the FC network with a destination IP address;

discovering an FC network address corresponding to the destination IP address by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields;

establishing the connection over the FC network using the discovered FC network address; and

transmitting the IP packet using the established connection over the FC network.

Claim 27 deals with a method for a storage system to transmit an IP packet over a Fibre Channel (FC) network. According to the method of claim 27, to discover an FC network address corresponding to an IP address, a storage system “accesses an FC name server database ...,” and “discovers an FC network address ... *by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields.*”

Foster fails to disclose or suggest, among other things, this FC network address obtaining operation of claim 27. Foster focuses on *encapsulating* a frame of a network protocol into another frame of another network protocol. Foster shows, for example, that a gateway switch, Multi-Protocol Edge Switch (“MPEX”) (*not* a storage system), constructs an FC data frame on an incoming IP packet. As an indication of the destination, either the

physical address of the destination hardware port or a virtual identifier can be inserted in the FC data frame. (See col. 13, lines 36-50 of Foster) The physical address of the destination hardware, however, is not obtained from an FC name server database; it is obtained through an analysis by the MPEX based on the deconstructed data of an IP packet. (See col. 12, lines 58-60 of Foster) Meanwhile, a virtual identifier in Foster cannot be an FC network address because a virtual identifier is not specific to a destination. Foster provides:

-- Each virtual identifier is assigned in some embodiments to a path through a network to one or more destinations, such as by a network manager for that network. Using virtual identifiers for routing of communications, *rather than network addresses or logical names that are specific to a destination*, provides a variety of benefits as discussed in greater detail below (col. 5, lines 25-31) --

The part cited by the Examiner in the Office Action, col. 10, lines 5-31, merely shows that each *fabric switch*, i.e., interconnect fabric module ("IFM"), maintains a virtual identifier table to map virtual identifiers to its own destination ports. A virtual identifier, as discussed above, is not a network address. (See col. 10, lines 10-13 of Foster) According to the method of claim 1, however, an *FC network address* is discovered from an FC name server database *without fabric switches' involvement*.

In summary, no part of Foster including the cited part discloses or suggests "discovering an FC network address corresponding to the destination IP address by searching a plurality of subfields in the FC name server database," much less "... according to predefined priorities for the plurality of subfields."

Like Foster, neither Olson nor Woodring discloses or suggests the FC network address obtaining operation of claim 27, i.e., "discovering an FC network address ... by

searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields.” Olson, as the Examiner acknowledged in the Office Action, merely discloses a virtualized SAN system that includes plural controllers to provide fault-tolerance and fail-over operation. Likewise, Woodring merely discloses FC switches/directors which enable an administrator to ascertain some usable information regarding some data and/or an FC network. Clearly, neither Olson nor Woodring discloses or suggests, among other things, “discovering an FC network address … by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields” of claim 27.

Because neither Foster nor Olson nor Woodring discloses or suggests “discovering an FC network address … by searching a plurality of subfields in the FC name server database according to predefined priorities for the plurality of subfields” of claim 27, claim 27 is thought to be patentable over Foster or Olson or Woodring or any combination of these references for at least this reason.

Newly added independent claims 31, 34, 38, 41 and 45 contain substantially the same limitations as discussed above regarding claim 27. Therefore, all independent claims 27, 31, 34, 38, 41 and 45 and all claims dependent upon these independent claims are thought to be allowable for at least this reason.

Applicants have not necessarily discussed here every reason why every pending independent claim is patentable over the cited art; nonetheless, Applicants are not waiving any argument regarding any such reason or reasons. Applicants reserve the right to raise any such additional argument(s) during the future prosecution of this application, if Applicants deem it necessary or appropriate to do so.

Conclusion

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

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Jordan M. Becker
Reg. No. 39,602

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
(408) 720-8300